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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,123	12/06/2001	Laurent Colantonio	DN2001202USA	8043

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EXAMINER

FISCHER, JUSTIN R

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 07/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/004,123

Applicant(s)

COLANTONIO ET AL.

Examiner

Justin R Fischer

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 1, 2004 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6-8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willard, Jr. (US 5,795,416, newly cited) and further in view of Willard, Jr. (US 5,427,166, of record) and Yokoyama (JP 06087977, newly cited). As best depicted in Figures 4 and 6, Willard '416 is directed to a pneumatic, runflat tire construction having a tread belt package, a pair of sidewalls, a chafer or bead support rubber 34 (contains a rim flange protector that protrudes axially outward), and a chafer reinforcement fabric or bead protector ply 27. While it is unclear from these figures if the bead protector ply is positioned at a surface of the chafer over the entire contact region between the chafer and the rim, such a design is extremely well known and

extensively incorporated into similar tire constructions in order to eliminate any direct interaction between the chafer and the rim (results in heat buildup and reduced tire performance). For example, Willard '166, as best depicted in Figures 1, 2, and 4, is directed to an extremely similar tire construction in which the bead protector ply is arranged over the entire surface of the chafer in order to eliminate contact between the chafer and the rim. Absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to extend the bead protector ply over the entire surface of the chafer for the benefits detailed above. Regarding the compositions of the sidewall and the bead support rubber (chafer), Willard '416 only states that the sidewall can be made of any suitable compound based on natural or synthetic rubber or any suitable combination thereof known in the art (Column 14, Lines 34-38)- the reference is completely silent as the composition of the bead support rubber. Yokoyama, on the other hand, is directed to a pneumatic tire construction in which the same rubber composition can be used in the sidewall and the chafer in order to suppress the curving of the respective rubber members (related to improved processing) and reduce the temperature dependence of several physical properties, whereby improved tire uniformity is ultimately achieved. It is further noted that the specific composition defined by Yokoyama is a blend of natural/isoprene rubber and syndiotactic polybutadiene- this is consistent with the description by Willard '416 that the sidewall should be formed of "any suitable compound based on natural or synthetic rubber or any suitable combination thereof known in the art". As such, one of ordinary skill in the art at the time of the invention

would have found it obvious to form the sidewall and chafer of Willard '416 from the same rubber composition in view of Yokoyama, wherein only the expected results would be achieved.

Regarding claims 2 and 3, the bead protector ply of Willard '166 is depicted as extending along the outer surface of the chafer, wherein the portion of the chafer that protrudes axially outward along the rim flange is seen to constitute a rim flange protector. It is emphasized that it would have been within the purview of one of ordinary skill in the art at the time of the invention to appropriately position the protector ply as desired.

As to claim 4, the bead protector ply of Willard '416 reinforces and protects the bead area by extending along the surfaces of the bead toe and the bead base.

Regarding claims 6-8 and 10, Willard '416 is completely silent as to the makeup of the bead protector ply. One of ordinary skill in the art at the time of the invention would have found the fibrous arrangements of the claimed invention to have been obvious since they are consistent with the well known and extensively used arrangements. For example, Willard '166 discloses the bead protector ply as being a square woven fabric in which non-metallic fibers, such as aramid, rayon, and nylon, are individually inclined at an angle of ± 45 degrees, such that the weaving angles are approximately 90 degrees. As set forth in the previous office action, one of ordinary skill in the art at the time of the invention would have recognized that said fabric is rubber impregnated (position not challenged by applicant).

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willard '416, Willard '166, and Yokoyama as set forth in the rejection of claim 1 above and further in view of Schmidt (US 3,902,356, of record). As noted in the previous paragraph, Willard '416 is completely silent as to the makeup of the bead protector ply (chafer reinforcing fabric). Willard '166, on the other hand, evidences the well-known construction of similar bead protector plies- that being a square woven fabric formed of textile materials. While the reference fails to expressly suggest the use of monofilament fibers, one of ordinary skill in the art at the time of the invention would have readily appreciated and expected such a square woven fabric to be formed of monofilament fibers since such fibers are extensively used, particularly as warp elements, in the formation of square woven fabric components, as shown for example by Schmidt (Column 2, Lines 50-58). As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the square woven fabric suggested by Willard '166 from monofilament fibers, there being no evidence of unexpected results to establish a criticality for such a construction.

Response to Arguments

5. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection. As correctly set forth by applicant, the sidewall and chafer of Willard '166 are not formed of a single, unitary construction of elastomer. As such, the previous rejections with Willard '166 have been removed. However, newly cited Willard '416 is completely silent to the composition of the sidewall and chafer, only stating that "the sidewall should be formed of any suitable compound

based on natural or synthetic rubber or any suitable combination thereof known in the art". In view of Yokoyama, one of ordinary skill in the art at the time of the invention would have found it obvious to form the sidewall and the chafer from the same composition- this is seen to constitute a single, unitary construction of elastomer. Furthermore, the specific composition suggested by Yokoyama is a blend of natural/isoprene rubber and polybutadiene (synthetic), which is consistent with the limited description of the sidewall provided by Willard '416. Thus, one of ordinary skill in the art at the time of the invention would have found it obvious to form the sidewall and chafer of Willard '416 from the same composition in order to suppress the curving of the respective components (related to processing) and reduce the temperature dependency of physical properties, both of which contribute to improved tire uniformity.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Justin Fischer

July 15, 2004


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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700